

What is claimed is:

1. An apparatus for storing and forwarding messages, the apparatus comprising:

a first network interface for interfacing with a first network;

a second network interface for interfacing with a second network;

means for receiving an incoming message and delivery information from said first network interface, said incoming message having a message content format of a first type;

a converter for converting said incoming message having a message content format of a first type to a message having a message content format of a second type in response to said incoming message and said delivery information, said converter using said delivery information for selecting said message content format of a second type for said message; and

means for presenting said message having said message content format of a second type to at least one recipient specified in said delivery information, said message content format of a second type including a format where said message is stored in a location in memory, said location in memory pointed to by location information, said means for presenting having a means for creating a web page for presenting said incoming message.

2. An apparatus as recited in claim 1, wherein said first network is a telephone network.

3. An apparatus as recited in claim 1, wherein said first network is an area network.
4. An apparatus as recited in claim 3, wherein said area network is a local area network.
5. An apparatus as recited in claim 3, wherein said area network is a wide area network.
6. An apparatus as recited in claim 3, wherein said area network is an intranet.
7. An apparatus as recited in claim 1, wherein said first network is a TCP/IP based network.
8. An apparatus as recited in claim 1, wherein said first network is the Internet.
9. An apparatus as recited in claim 1, wherein said second network is a telephone network.
10. An apparatus as recited in claim 1, wherein said second network is an area network.

11. An apparatus as recited in claim 10, wherein said area network is a local area network.
12. An apparatus as recited in claim 10, wherein said area network is a wide area network.
13. An apparatus as recited in claim 10, wherein said area network is an intranet.
14. An apparatus as recited in claim 1, wherein said second network is a TCP/IP based network.
15. An apparatus as recited in claim 1, wherein said second network is the Internet.
16. An apparatus as recited in claim 1, wherein said first format is an email format.
17. An apparatus as recited in claim 1, wherein said first format is a fax format.
18. An apparatus as recited in claim 1, wherein said first format is a digitized audio format.

19. An apparatus as recited in claim 1, wherein said first format is a digitized video format.
20. An apparatus as recited in claim 1, wherein said first format is a digitized graphics format.
21. An apparatus as recited in claim 1, wherein said second format is an email, format.
22. An apparatus as recited in claim 1, wherein said second format is a fax format.
23. An apparatus as recited in claim 1, wherein said second format is a digitized audio format.
24. An apparatus as recited in claim 1, wherein said second format is a digitized video format.
25. An apparatus as recited in claim 1, wherein said second format is a digitized graphics format.

26. An apparatus as recited in claim 1, wherein said means for presenting includes means for creating a pointer to said location of said web page in said memory.

27. An apparatus as recited in claim 1, further including means for generating notification to a recipient specified in said delivery information, said notification including a pointer.

28. An apparatus as recited in claim 27, wherein said pointer is used by a messaging interface to determine said location of said message stored in said location in memory.

29. An apparatus as recited in claim 28, wherein said messaging interface is a browser.

30. An apparatus as recited in claim 27, wherein said pointer is a universal resource locator.

31. An apparatus as recited in claim 1, wherein said message stored in a location in memory is presented in a web page.

32. An apparatus as recited in claim 1, wherein said location information pointing to said location in memory is a universal resource locator.

33. An apparatus as recited in claim 1, further including a converter for converting from a fax format to a web page format.

34. An apparatus as recited in claim 1, further including a converter for converting from an email format to a web page format.

35. An apparatus as recited in claim 1, further including a converter for converting from a digitized audio format to a web page format.

36. An apparatus as recited in claim 1, further including a converter for converting from a digitized video format to a web page format.

37. An apparatus as recited in claim 1, further including a third network interface means for interfacing with a third network.

38. An apparatus as recited in claim 37, wherein said third network is a telephone network.

39. An apparatus as recited in claim 37, wherein said third network is an area network.

40. An apparatus as recited in claim 39, wherein said area network is a local

area network.

41. An apparatus as recited in claim 39, wherein said area network is a wide area network.

42. An apparatus as recited in claim 39, wherein said area network is an intranet.

43. An apparatus as recited in claim 37, wherein said third network is a TCP/IP based network.

44. An apparatus as recited in claim 37, wherein said third network supports messages having a message content format that includes an email format.

45. An apparatus as recited in claim 37, wherein said third network supports messages having a message content format that includes a digitized audio format.

46. An apparatus as recited in claim 37, wherein said third network supports messages having a message content format that includes a digitized video format.

47. An apparatus as recited in claim 37, wherein said third network supports messages having a message content format that includes a graphics format.

48. An apparatus as recited in claim 1, wherein said means for presenting is responsive to a browser generating hyperlink commands to control the transfer of messages, having said message content format of a second type.

49. An apparatus as recited in claim 48, wherein said hyperlink commands provide play, rewind, fast forward, and pause commands to control said transfer of said messages, having said message content format of a second type.

50. An apparatus as recited in claim 1, wherein said first network interface includes means for interpreting a destination address sent through a telephone keypad.

51. An apparatus as recited in claim 1, wherein said delivery information includes a destination address, said destination address sent through a DTMF generator.

52. An apparatus as recited in claim 51, wherein said DTMF generator includes a telephone keypad having a button signifying a "." symbol, an "@" symbol, and a ".com" symbol, said symbols having a defined position on said button.

53. An apparatus as recited in claim 52, wherein said symbols are specified by a button having a digit corresponding to said defined position.



54. An apparatus as recited in claim 1, wherein said delivery information includes a destination address, said destination address placed by said means for presenting within an email message.

5 55. A system for receiving and sending messages, the system including at least a first messaging apparatus and a second messaging apparatus, each messaging apparatus comprising:

10 a converter for converting an incoming message having a first format to a processed message having a delivery format, said converter converting said incoming message to said delivery format according to a format specified by delivery information provided by a user;

15 a first network interface linked to said converter and a first network, said first network interface including a means for transporting a message between said converter and at least one messaging interface linked to said first network;

a second network interface linked to said converter and a second network, said second network interface for transporting a message between said converter and at least one messaging interface linked to said second network;

means for delivering said processed message through said first network or through said second network in response to said delivery information; and

20 wherein said first messaging apparatus is coupled to said second messaging apparatus through said first network.

56. A system as recited in claim 55, wherein said means for delivering includes

a routing program and a routing table, said routing program using said routing table and said delivery information to determine whether to deliver said processed message through said first network or said through said second network.

57. A system as recited in claim 56, wherein said first network is the Internet.

5 58. An apparatus as recited in claim 55, wherein said converter converts an incoming message having a fax format to said processed message having said delivery format that includes a web page.

59. An apparatus as recited in claim 55, wherein said converter converts an incoming message having an email format to said processed message having said delivery format that includes a web page format.

60. An apparatus as recited in claim 55, wherein said converter converts an incoming message having a digitized audio format to said processed message having said delivery format that includes a web page format.

61. An apparatus as recited in claim 55, further including a memory for storing said processed messages, said memory linked to said message processing means.

62. An apparatus as recited in claim 55, wherein said converter converts an incoming message having a fax format to said processed message having said

delivery format that includes an email format.

63. An apparatus as recited in claim 55, wherein said converter converts an incoming message having an email format to said processed message having said delivery format that includes a fax format.

5 64. An apparatus as recited in claim 55, wherein said first network interface includes a messaging layer for supporting a messaging interface using hyperlink commands to manage in real-time the transfer of said processed message having a delivery format between said first network interface and said messaging interface.

65. An apparatus as recited in claim 64, wherein said messaging interface includes a web browser and said delivery format includes a web page stored in a memory location.

66. An apparatus as recited in claim 55, wherein said first network interface includes a means for interpreting an email address sent through a telephone keypad.

15 67. An apparatus as recited in claim 55, wherein said first network interface communicates with a telephone network, said first network interface having a messaging layer for interpreting a destination address generated by a DTMF

signal generator, said destination address generated including a "." symbol, an "@" symbol, and a ".com" symbol.

5 68. An apparatus as recited in claim 67, wherein said destination address follows an Internet Domain Name System addressing scheme; and said DTMF signal generator includes a telephone keypad;

said "." symbol generated by two successive DTMF signals with each signal corresponding to the "1" button on said telephone keypad;

10 said "@" symbol generated by two successive DTMF signals with each signal corresponding to the "1" button and the "2" button, respectively; and

said ".com" symbol generated by two successive DTMF signals with each signal corresponding to the "1" button and the "3" button, respectively.

69. An apparatus as recited in claim 55, further including a third network interface for communicating with a third network.

15 70. An apparatus as recited in claim 69, wherein said third network is a network supporting distributed processing of messages.

71. An apparatus as recited in claim 69, wherein said third network is an intranet.

72. An apparatus as recited in claim 55, wherein said message is stored in a location corresponding to a recipient ID.

5 73. An apparatus as recited in claim 72, further including a message notification means for notifying a recipient when a message is stored in said location, said message notification means responsive to a connection made to said first network by said recipient using a messaging interface, said message notification means including:

a second memory comprising network address information for said recipient; and

10 means for determining when said recipient is connected to said first network, said means for determining using said network address information to poll for said connection on said first network.

74. An apparatus as recited in claim 73, wherein said network address information includes an internet protocol address.

15 75. An apparatus as recited in claim 73, wherein said means for determining includes a PING program.

76. An apparatus as recited in claim 1, further including:

connection notification means for providing a recipient connection signal in response to a connection by a messaging interface with said first network; and

message notification means for providing message notification to a recipient in response to said recipient connection signal received from said connection notification means.

5 77. An apparatus as recited in claim 76, wherein said network address information includes an internet protocol address.

78. An apparatus as recited in claim 76, wherein said connection notification means is a terminate and stay resident program.

79. An apparatus as recited in claim 76, wherein said connection notification means includes:

10 means for receiving network address information in response to a connection made by a messaging interface with said first network; and

means for including said network address information with said recipient connection signal.

15 80. A method of operating a messaging system having at least a first messaging apparatus and a second messaging apparatus, the method comprising the steps of:

interfacing the first messaging apparatus with a first network;

interfacing the second messaging apparatus with said first network;

interfacing the first messaging apparatus with a second network;

interfacing the second messaging apparatus with a third network;

receiving an incoming message and delivery information from said first network, said incoming message and said delivery information received by said first messaging apparatus, said incoming message having a message content format of a first type;

5 routing said incoming message and said delivery information to the second messaging apparatus if said delivery information contains a delivery address corresponding to a recipient accessible via said third network, the second messaging apparatus converting said incoming message to a message having a delivery format in response to said delivery information;

10 converting said incoming message to a message having a delivery format, said step of converting using said delivery information to determine said delivery format, said step of converting performed by the first messaging apparatus if said delivery information contains a delivery address corresponding to a recipient accessible via said second network; and

15 presenting said message to said recipient using said delivery format.

81. A method as recited in claim 80, wherein said step of presenting includes a step of creating a web page to present said incoming message and a step of storing said web page in a memory location.

20 82. A method as recited in claim 81, wherein said step of creating includes a step of creating a pointer to said memory location.

83. A method as recited in claim 80, further including a step of generating notification to a recipient specified in said delivery information.

84. A method as recited in claim 83, wherein said step of generating notification includes a step of generating a pointer to said message having said delivery format.

85. A method as recited in claim 83, further including a step of using said pointer to access said message having said delivery format.

86. A method as recited in claim 80, wherein said step of converting includes a step of converting from a fax format to a delivery format that includes a web page.

87. A method as recited in claim 80, wherein said step of converting includes a step of converting from an email format to a delivery format that includes a web page.

88. A method as recited in claim 80, wherein said step of converting includes a step of converting from a digitized audio format to a delivery format that includes a web page.

89. A method as recited in claim 80, wherein said step of converting includes a



step of converting from a digitized video format to a delivery format that includes a web page.

90. A method as recited in claim 80, wherein said first network is comprised of the Internet.

5 91. A method as recited in claim 80, wherein said step of interfacing with a second network includes a step of sending and receiving messages having a format that includes an email format.

10 92. A method as recited in claim 80, wherein said step of interfacing with a second network includes a step of sending and receiving messages having a format that includes a digitized audio format.

93. A method as recited in claim 80, wherein said step of interfacing with a second network includes a step of sending and receiving messages having a format that includes a digitized video format.

15 94. A method as recited in claim 80, wherein said step of interfacing with a second network includes a step of sending and receiving messages having a format that includes a graphics format.

95. A method as recited in claim 80, wherein said step of presenting is responsive to a browser generating hyperlink commands to control the transfer of messages having said delivery format.

96. A method as recited in claim 80, further including a step of using hyperlink commands to provide play, rewind, fast forward, and pause commands to control said transfer of said messages.

97. A method of interpreting an Internet address generated by a DTMF signal generator having an alphanumeric keypad, comprising the steps of:

associating two successive selections of a "1" button on the keypad with a "." symbol;

associating the successive selections of a "1" button and a "2" button on the keypad, respectively, with an "@" symbol; and

associating the successive selections of a "1" button and a "3" button on the keypad, respectively, with a ".com" symbol.

98. A method as recited in claim 97, wherein said DTMF signal generator is a telephone.

99. A method as recited in claim 98, further including a step of generating numeric symbols comprising zero to nine by following a button selection for generating one of said numeric symbols with a "0" button selection.